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Agency IT Overview

IT Capture includes two distinct components for the NDUS Office, the IT costs associated with the actual day to day operations of the NDUS Office (included in the IT Capture Infrastructure section) and the system-wide operations of the NDUS Common Information Services (CIS), or "CIS Pool" (included in the IT Capture Projects section).

NDUS-CIS provides programs and services to all campuses of the NDUS, fortifying students, faculty and staff through strong links to evolving technologies and information. The 11 schools in the NDUS share networking, academic, administrative and general computing through the Higher Education Computer Network (HECN) and videoconferencing through the Interactive Video Network (IVN). They also share library services through the Online Dakota Information Network (ODIN) and links to online courses through the NDUS-Online. An annual report (entitled *"Back to the Future"* for FY05*)* is prepared at the end of each fiscal year by the CIO of the NDUS, that summarizes the activities and accomplishments of the NDUS-CIS. The FY05 annual report is currently available and the report for FY06 will be available later this year.

In cooperation with the State CIO and ETC Director, the NDUS CIO will be submitting the NDUS portion of the *State IT Plan* later this year, and it will also address the long-term strategic IT goals, objectives and activities of the NDUS-CIS, as well as the campus alignment plans.

Agency IT Plan Contact Data
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Agency Technology Goals And Objectives
NDUS Office IT Goals & Objectives:
1. Maintain Base Operations
    a. Continue to evaluate the need for replacement of desktops and laptops, and provide training to staff as systems/software are upgraded.
    b. Continue operation of the mainframe student financial aid programs, including programmer and analyst time for revision and updates to the programs, based on federal and SBHE directives. The majority of the data processing fees in the NDUS office budget relate to these ongoing costs. In addition, telephone costs are also included in the IT costs of the administration system.
    c. Continue to evaluate the user needs of the office, the interface needs external to the office and new and improved advances in technology and software. The NDUS office is a small agency that must keep current with the latest technologies in order to communicate effectively with other NDUS Office staff, members of the SBHE, the 11 campuses, students, public, state agencies, legislators, and others.
    d. Continue to contract with an outside vendor for further website development, as needed.

2. Support Long-Range Goals of SBHE – The 2006-07 proposed objectives, associated with the long-range goals of the SBHE, will be discussed with the Board in August, and will be presented for their final approval in September 2006. Those objectives with an IT component will be incorporated into the NDUS Office IT goals.

NDUS-CIS Strategic IT Goals:
1. IMPROVE NDUS IT-ENABLED BUSINESS PROCESSES AND SERVICES.
    a. Along with state government, implement upgrades and enhancements to the new financial/student/accounting/human resources management system known as ConnectND.

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b. Evaluate proceeding with phase two of enhancing library services by implementing MetaLib/SFX. Costs for this would be through a charge back to the affected libraries.

c. Implement Phase 1 of a converged environment. This includes some or all of the following; deployment of IP Multimedia including a test bed to determine future system implementation in Phase 2, implementation of Voice over the Internet Protocol (VoIP) which uses the IP data network for transporting telephone conversations instead of the current practice of a dedicated telephone circuit, and evaluate a migration to Session Initiated Protocol (SIP) which is an application layer control protocol or the "glue" that allows voice, data, and video to be used in the same call on an IP connection. See Section IP Project, Collaboration Project-Phase 1. Also, see items 2b and 2c below in Section 2, Support NDUS Infrastructure Needs.

d. Implement Enterprise Project Management Office to include Enterprise Architecture in preparation for changes planned in the upcoming legislative session regarding project management and IT planning being reported to the SBHE vs State through ITD.

2. SUPPORT NDUS INFRASTRUCTURE NEEDS.

a. Offer reliable, cost-effective and appropriate NDUS network services.

b. Provide middleware tools and data to help people use networked resources and services with security and privacy more easily. This is the precursor to using SIP for IP Multimedia and ties in with item 2c below. Also, see item 1c above in Section 1, Improve NDUS IT-Enabled Business Process and Services.

c. Prepare the IP infrastructure for IP Multimedia which will be the convergence of voice, data, and video along with other collaboration tools as mentioned above. In the 1990s we heard a lot about "convergence" – this is happening now and it is called different names by the voice/data/video vendors. It is important to have the infrastructure in place that is capable of supporting such things as SIP, VoIP, and IP Multimedia. See One-time Budget Request, Implement Collaboration Project – Phase 1.

d. Enable libraries to provide easy access to licensed electronic information.

e. Provide IT enterprise architecture and project management leadership.

3. IMPROVE OR ENHANCE NDUS COLLABORATIVE EFFORTS TO INCREASE EFFICIENCY AND COST EFFECTIVENESS.

a. Monitor need for staffing and availability so that the NDUS help desk supports the majority of user needs.

b. Improve communications with all stakeholders of NDUS-CIS services.

c. Collaborate with NDUS campuses, K-12, state and local governments and libraries to identify appropriate learning and research support systems; including the implementation of a state-wide learning management system.

d. Work with ODIN libraries to expand digital holdings.

e. Promote Internet2 and advanced networking. Support efforts to expand connectivity to the "Northern Tier" network which would bring high speed advanced networking endpoints into North Dakota. Advanced networking is poorly distributed in the upper Midwest and this would give a much needed presence. See Budget items Northern Tier Network and Northern Tier Network Annual Maintenance. Listed as same under IT Projects below.

f. Continue to work with state government and K-12 on converged services.

4. PROVIDE AND MANAGE RESOURCES TO ALIGN WITH NDUS STRATEGIC GOALS.

a. Identify new, or re-purpose existing, resources to enhance current services, and initiate new services.

b. Implement the NDUS Enterprise Project Management Office to provide project management oversight, enterprise architecture administration, and IT planning in conjunction with the NDUS CIO. This office will be instrumental to the success in this upcoming legislative session to bring responsibility for IT planning and project management/oversight under the SBHE instead of currently under the State department of ITD.

c. Provide professional staff to meet NDUS needs.

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1. If applicable, describe the reason for any extraordinary increase or decrease in your infrastructure costs.

In addition to the purchase of desktops and laptops, the NDUS Office will replace up to 10 flat screen monitors, at an average cost of $279 each. In 2003, 9 laptops were purchased for State Board of Higher Ed members, from funds allocated from the Board initiative fund. These 9 laptops are scheduled for replacement during the 2007-09 biennium, at an estimated total cost of approximately $15,200. These nine laptops are in addition to the 12 laptops and 3 replacements in #3 below.

2. Total number of desktop computers: 6

   Number of desktops for which you are requesting replacement funding: 5

   Average replacement cost/desktop: 745

3. Total number of laptop computers: 12

   Number of laptops for which you are requesting replacement funding: 3

   Average replacement cost/laptop: 1,688

What state planning region are these desktop/laptop computers located?

Region 1   0 **2**   0 **3**   0 **4**   0 **5**   0 **6**   0 **7**   18 **8**   0

4. What percentage of these pcs are running the following operating systems:

   (total should be equal to 100%)

Windows 98	0 %
Windows NT	0 %
Windows 2000	0 %
Windows XP	100 %
Other	0 %

5. What additional expenditures are being paid out of non-appropriated funds?   0

Please explain:

Agency Technology Activities

The IT costs associated with the actual day to day operations of the NDUS Office are included in the IT Capture Infrastructure section.

* The goals and objectives of the NDUS Office must take into account not only the needs of the staff of the NDUS office but also the needs of the members of the SBHE, the 11 campuses and their related entities, students, general public, state agencies, legislators, and others. Providing the highest quality service and communicating with all users and customers requires the use of the latest technologies.

* The NDUS Office maintains the student financial aid programs on a mainframe at ITD. We will continue maintenance/change of mainframe program associated with the processing of financial aid programs, to comply with federal and SBHE directives. ITD is in the process of converting the financial aid programs from the mainframe to a platform.

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* The NDUS Office currently uses Microsoft Office suite for its day-to-day operations. Netscape and/or Internet Explorer are used to access e-mail and the World Wide Web. We will continue to update these programs as new versions become available.

* The NDUS Office maintains a local area network, which ITD administers through their service. The LAN is currently connected to the NDUS Office desktops, laptops, 2 printers and a copier.

* The NDUS Office maintains a website at **Error! Hyperlink reference not valid.** This is a very efficient way to keep the various constituents up-to-date on what's going on in the NDUS. The NDUS Office will continue to develop the website.

* The NDUS Office continually evaluates the need to update PC's and laptops, along with providing the necessary training.

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IT5310	IT SOFTWARE AND SUPPLIES	$4,100	$3,000	$0	$3,000	$3,000
IT5510	IT EQUIPMENT UNDER $5000	$21,000	$30,300	$0	$30,300	$30,300
IT6010	IT DATA PROCESSING	$43,300	$41,700	$0	$41,700	$41,700
IT6020	IT COMMUNICATIONS	$45,300	$46,000	$0	$46,000	$46,000
IT6030	IT CONTRACT SERVICES & REPAIRS	$42,000	$40,000	$0	$40,000	$40,000
	Total Budget:	**$155,700**	**$161,000**	**$0**	**$161,000**	**$161,000**
001	STATE GENERAL FUND	$151,800	$157,000	$0	$157,000	$157,000
E006	STATE APPROVING AGENCY	$3,900	$4,000	$0	$4,000	$4,000
	Total Funding:	**$155,700**	**$161,000**	**$0**	**$161,000**	**$161,000**

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Project: CIS001   Common Information Services CIS Pool

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Agency Priority - 1   **Project Type:** Ongoing initiative

Project description

The CIS Pool includes the general fund support for the operations of the NDUS Common Information Services (CIS), including ConnectND, Higher Ed Computer Network (HECN), Interactive Video Network (IVN), Online Dakota Information Network (ODIN) & links to online courses through the NDUS-Online.

Briefly describe the business need or problem driving the proposed project.

These funds are needed for the ongoing base operations of the central services provided by NDUS-CIS, as well as to provide permanent funding for critical needs related to ConnectND and wide area network growth. Additional detail is provided in the "Financial Impact" narrative.

Describe how the project is consistent with the organizations mission.

The mission of the NDUS is to enhance the quality of life of all those we serve and the economic and social vitality of ND through the discovery, sharing and application of knowledge. NDUS-CIS provides broad access, programs and services to the citizens of the state of North Dakota and beyond. These are all key to the success of the mission of the "North Dakota University System - A Vital Link To A Brighter Future" for the state of North Dakota.

Describe the anticipated benefits of the project and who will derive the benefits.

NDUS-CIS provides programs and services to all campuses of the NDUS, fortifying students, faculty and staff through strong links to evolving technologies and information. Through cooperation, collaboration, integration, partnerships, etc, strong links between state government and higher education make the work of the CIS possible. The services that are provided benefit NDUS campuses, students, K-12 education, communities, individual constituents, organizations and groups.

Describe the impact of not implementing the project.

NDUS-CIS is not a new project, and the impact of not continuing the (general fund) base funding that is provided in the CIS pool, would result in discontinuing the system-wide services that are now available. The impact of not funding the requested increases is described in the "Financial Impact" narrative.

Identify any risks associated with implementing this project and explain how the risks will be mitigated.

NONE

Describe the additional costs?

Approximately $15.89 million of additional expenditures are paid from non-appropriated funds. The funding sources and estimated amounts include:

¿$12 million from student fees

¿$3.37 million from user fees and chargebacks (Includes HECN-SIS Campus Assessments $677,765; HECN-SIS, SLND paid development and functional staff $867,213; HECN-South $170,000; IVN $200,000; ODIN $1,454,600)

¿$523,700 Library Pass Thru for database access licensing

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Enter any additional costs for the project that are not included in IT Object Codes used in the Project Cost Screen?
Additional Costs? - $15,893,278
Optional Project Costs - $0
Total Project Cost? -   **$43,127,571**
Tot Proj Costs + Optionals -   **$43,127,571**

What additional expenditures are being paid out of non-appropriated funds?
The additional funds will pay for the portion of the CIS operations that are not covered by the general fund.

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IT7090	SPECIAL LINE OTHER	$20,607,093	$27,384,293	$0	$27,384,293	$30,000,000
	Total Budget:	**$20,607,093**	**$27,384,293**	**$0**	**$27,384,293**	**$30,000,000**
001	STATE GENERAL FUND	$20,607,093	$27,384,293	$0	$27,384,293	$30,000,000
	Total Funding:	**$20,607,093**	**$27,384,293**	**$0**	**$27,384,293**	**$30,000,000**

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Project: CIS002 Northern Tier Network

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Agency Priority - 4 **Project Type:** New initiative

Project description

The Northern Tier Network (NTN) installation would result in a "super computing" network infrastructure for a West/East Link from Spokane to Minneapolis (along I94) and a North/South Link from Winnipeg to Omaha (along I29) . The purpose of this link would be to support research, education, and economic development initiatives for North Dakota and the region.

Briefly describe the business need or problem driving the proposed project.

Advanced (super computing) networking is poorly distributed in the upper Midwest. This project would provide for a much needed presence inside the boundaries of the state and allow for additional institutions and their partners to take advantage of an advanced network. Federal participation in grants are asking whether research institutions have access to these types of networks and without the access, the research institutions run a high risk of losing project funding requests.

Describe how the project is consistent with the organizations mission.

The mission of the NDUS is to enhance the quality of life of all those we serve and the economic and social vitality of ND through the discovery, sharing and application of knowledge. NDUS-CIS provides broad access, programs and services to the citizens of the state of North Dakota and beyond. These are all key to the success of the mission of the "North Dakota University System - A Vital Link To A Brighter Future" for the state of North Dakota.

Describe the anticipated benefits of the project and who will derive the benefits.

All of the NDUS (students, faculty, staff, and other stakeholders) would benefit from funding this project as other institutions would have the ability to connect to this "super computing" network without having to incur the costs for high speed circuits outside of the state of North Dakota. Greater opportunities would exist for additional institutions to take part in research, education and economic development initiatives.

Describe the impact of not implementing the project.

(See financial impact narrative)

Identify any risks associated with implementing this project and explain how the risks will be mitigated.

Risks for this project are minimal as the technology for this type of network already exists in other states and would be an extension into North Dakota. One area thought to be a concern was with the availability of fiber optic cable between the intended locations; however, at least one vendor has been identified that would have the necessary fiber optic cable plant in place.

Describe the additional costs?

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Enter any additional costs for the project that are not included in IT Object Codes used in the Project Cost Screen?

Additional Costs? -

Optional Project Costs - $0

Total Project Cost? - **$0**

Tot Proj Costs + Optionals - **$0**

What additional expenditures are being paid out of non-appropriated funds?

(See financial impact narrative)

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IT7090	SPECIAL LINE OTHER	$0	$900,000	$2,700,000	$3,600,000	$950,000
	Total Budget:	**$0**	**$900,000**	**$2,700,000**	**$3,600,000**	**$950,000**
001	STATE GENERAL FUND	$0	$900,000	$2,700,000	$3,600,000	$950,000
	Total Funding:	**$0**	**$900,000**	**$2,700,000**	**$3,600,000**	**$950,000**

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Project: CIS003   Collaboration Project-Phase I

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Agency Priority - 2   **Project Type:** Application replacement   **Age of Current Application:**

Project description

North Dakota University System Common Collaboration Suite (CCS) (See additional narrative)

Briefly describe the business need or problem driving the proposed project.

See additional narrative

Describe how the project is consistent with the organizations mission.

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Describe the anticipated benefits of the project and who will derive the benefits.

See additional narrative

Describe the impact of not implementing the project.

The ability to collaborate with others effectively and efficiently will be greatly diminished.

Identify any risks associated with implementing this project and explain how the risks will be mitigated.

Adhering to the scope of the project as there are several systems involved and as the project progresses, more capabilities will want to be included. Project scope will be closely monitored to manage what items are within the scope and those that are not so scope creep is limited or does not happen.

Describe the additional costs?

None

Enter any additional costs for the project that are not included in IT Object Codes used in the Project Cost Screen?

Additional Costs? - $0

Optional Project Costs - $0

Total Project Cost? -   **$0**

Tot Proj Costs + Optionals -   **$0**

What additional expenditures are being paid out of non-appropriated funds?

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None

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IT7090	SPECIAL LINE OTHER	$0	$0	$1,000,000	$1,000,000	$0
	Total Budget:	**$0**	**$0**	**$1,000,000**	**$1,000,000**	**$0**
001	STATE GENERAL FUND	$0	$0	$1,000,000	$1,000,000	$0
	Total Funding:	**$0**	**$0**	**$1,000,000**	**$1,000,000**	**$0**

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Project: CIS004   Network Refurbishment to Replace Convergence

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Agency Priority - 3   **Project Type:** Major enhancement/upgrade

Project description

Campus network refurbishment to replace convergence (See Additional Narrative)

Briefly describe the business need or problem driving the proposed project.

At many of the NDUS campuses, the IT infrastructure is outdated and is unable to support the needs of users in today's high tech world. This project will assist campuses in the upgrade to their networks and prepare the way for them to launch into the world of converged voice/data/video. The ability of the network to perform is critical to the success of convergence.

Describe how the project is consistent with the organizations mission.

The mission of the NDUS is to enhance the quality of life of all those we serve and the economic and social vitality of ND through the discovery, sharing and application of knowledge. NDUS-CIS provides broad access, programs and services to the citizens of the state of North Dakota and beyond. These are all key to the success of the mission of the "North Dakota University System - A Vital Link To A Brighter Future" for the state of North Dakota.

Describe the anticipated benefits of the project and who will derive the benefits.

All of the NDUS (students, faculty, staff, and other stakeholders) would benefit from funding this project as higher data transmission speeds, reliability, security and redundancy can be attained.

Describe the impact of not implementing the project.

The ability to support research, education and economic development will be greatly diminished. The day-to-day ability to perform tasks will be decreased and the ability to implement new technologies will become a greater risk.

Identify any risks associated with implementing this project and explain how the risks will be mitigated.

Little risk is involved with this project as all the items listed are used elsewhere in the country and in many cases are items that are familiar to the IT staff. The products to be implemented are similar to current systems; however, they are "new and improved" to handle the latest technologies and industry standards.

Describe the additional costs?

In some cases, campuses may have funds they intend to use to augment capabilities of the network on their campus; however, this project is to assist covering costs associated with preparing campuses to position all the NDUS campuses for convergence and support of new technologies.

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Enter any additional costs for the project that are not included in IT Object Codes used in the Project Cost Screen?

Additional Costs? - $0

Optional Project Costs - $0

Total Project Cost? -

Tot Proj Costs + Optionals -   **$0**

What additional expenditures are being paid out of non-appropriated funds?

None

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IT7090	SPECIAL LINE OTHER	$0	$0	$2,000,000	$2,000,000	$0
	Total Budget:	**$0**	**$0**	**$2,000,000**	**$2,000,000**	**$0**
001	STATE GENERAL FUND	$0	$0	$2,000,000	$2,000,000	$0
	Total Funding:	**$0**	**$0**	**$2,000,000**	**$2,000,000**	**$0**